

AMENDMENT & RESPONSE UNDER 37 C.F.R. § 1.116 - EXPEDITED PROCEDUREPage 2
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Title: HORIZONTAL MEMORY DEVICES WITH VERTICAL GATES

7. (Amended) A transistor, comprising:

a horizontal substrate, wherein the substrate includes a source region, a drain region, and a channel region separating the source and the drain region;

an edge-defined vertical floating gate having sub lithographic dimensions separated from a first portion of the channel region by a first oxide thickness; and

at least one edge-defined vertical control gate having sub lithographic dimensions separated from a second portion of the channel region by a second oxide thickness, wherein the at least one vertical control gate is parallel to and opposing the vertical floating gate.

14. (Amended) A floating gate transistor, comprising:

a horizontal substrate, wherein the substrate includes a source region, a drain region, and a channel region separating the source and the drain region;

a first edge-defined vertical gate having sub lithographic dimensions located above a first portion of the channel region and separated from the channel region by a first oxide thickness;

a second edge-defined vertical gate having sub lithographic dimensions located above a second portion of the channel region and separated from the channel region by a second oxide thickness; and

a third edge-defined vertical gate having sub lithographic dimensions located above a third portion of the channel region and separated from the channel region by the second oxide thickness.

REMARKS

Applicants have carefully reviewed and considered the Office Action mailed on October 18, 2001, and the references cited therewith.

Claims 1, 7, and 14 are amended, claims 1-23 are now pending in this application. Amendments made to claims 1, 7, and 14 are made for purposes of clarification based on the Examiner's Final Rejection and are not believed to introduce any new matter. Moreover, Applicants assert that the amended claims are sufficient to place the present application in condition for allowance without necessitating any additional search by the Examiner. Correspondingly, Applicants respectfully request that the above amended claims be entered.